Acer AL2251W

Service Guide

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Service Guide Version and Revision

Version	Release Date	Revision History	TPV model
A00	Mar.-30-2007	Initial Release	TC7AMUDBWGAGAC

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Conventions

The following conventions are used in this manual:

Screen messages	Denotes actual messages that appear on screen.
Note	Gives bits and pieces of additional information related to the current topic.
Warning	Alerts you to any damage that might result from doing or not doing specific actions.
Caution	Gives precautionary measures to avoid possible hardware or software problems.
Important	Remind you to do specific actions relevant to the accomplishment of procedures.

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Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office may have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

Warning: (For FCC Certified Models)

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Notice:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibility of the user to correct such interference.

As ENERGY STAR® Partner our company has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Warning:

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerous high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

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Precautions

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, uses a mounting kit approved by the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.
- Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V AC, Min. 5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.

Special Notes On LCD Monitors

The following symptoms are normal with LCD monitor and do not indicate a problem.

Notes

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.

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Introduction

Scope

This specification defines the requirements for the 22" MICROPROCESSOR based Multi-mode supported high resolution color LCD monitor. This monitor can be directly connected to general 15-pin D-sub VGA connector and 24-pin DVI connector, also supports VESA DPMS power management and plug & play function. There is a build-in stereo audio amplifier with OSD control to drive a pair of speakers.

Description

The LCD monitor is designed with the latest LCD technology to provide a performance oriented product with no radiation. This will alleviate the growing health concerns. It is also a space saving design, allowing more desktop space, and comparing to the traditional CRT monitor, it consumes less power and gets less weight in addition MTBF target is 50k hours or more.

Chart of AL2251W

Panel	M220EW01 V2
Signal Interface	D-Sub 15-pin
	DVI 24-pin
Sync Type	Separate / Compatible
Color Temp User Adjust	Support
DDC	DDC2B
Speaker	Yes
Headphone Jack	No
Microphone Jack	No
USB Hub	Not support
Tilt / Swivel	Yes / No

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Electrical Requirements

Standard Test Conditions

All tests shall be performed under the following conditions, unless otherwise specified.

Ambient light	:	Dark room
Viewing distance	:	40 cm for LCD performance, 20 cm for LCD failures
Warm up time		
All specifications	:	＞30 minutes
Fully functional	:	5 seconds
Measuring equipment	:	Chroma 7120 signal generator or equivalent, directly
		Connected to the monitor under test.
		Minolta CA100 photometer, or equivalent
Control settings		
User brightness control	:	Set to Factory preset value (cut off raster)
User contrast control	:	Set to factory preset value, which allows that the brightest two of 32 linear distributed gray-scales (0～ 700mv) can be distinguished.
User red/white balance,		
Green/white balance and		
Blue/white balance control	:	In the center (unless otherwise specified)
Power input	:	230V± 5%
Ambient temperature	:	20±5□
Display mode	:	1680x1050, 60 Hz, all white

Measurement systems

The units of measure stated in this document are listed below:

1 gamma = 1 nano tesla

1 tesla = 10,000 gauss

cm = in x 2.54

Lb = kg x 2.2

Degrees F = [℃ x 1.8] + 32

Degrees C = [℉ - 32]/1.8

u' = 4x/(-2x + 12y + 3)

v' = 9y/(-2x + 12y + 3)

x = (27u'/4)/[(9u'/2) - 12v' + 9]

y = (3v')/[(9u'/2) - 12v' + 9]

nits = cd/(m2) = Ft-L x 3.426

lux = foot-candle x 10.76

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LCD Monitor General Specification

LCD Panel	Driving system	TFT Color LCD
	Size	55.87cm(22")
	Pixel pitch	0.282mm(H)x 0.282mm(V)
	Brightness	300cd/m2 (Typical)
	Contrast	1000:1(Typical)
	Viewable angle	160° (H) 160° (V)
	Response time	2ms(Gray to Gray)
Input	Video	R,G,B Analog Interface
		Digital interface
	H-Frequency	31KHz – 80KHz
	V-Frequency	56-75Hz
Display Colors		16.2M Colors
Dot Clock		144.2MHz
Max. Resolution		1680 x 1050 @60Hz
Plug & Play		VESA DDC2B ™
Power Consumption	ON Mode	≤ 49W
	OFF Mode	≤ 1W
Input Connector		D-Sub 15pin
		DVI-D 24pin (DVI w/HDCP)
Input Video Signal		Analog:0.7Vp-p(standard), 75 OHM, Positive
		Digital signal
Maximum Screen Size		Horizontal : 473mm Vertical : 296mm
Power Source		100~240VAC,47~63Hz
Environmental Considerations		Operating Temp: 0° to 40°C Storage Temp.: -20° to 60°C Operating Humidity: 10% to 90%
Dimensions		512.4X434X173.5(W×H×D)mm
Weight (N. W.)		6.5kg

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External Controls:	Switch	• Auto Adjust Key • </Volume • >/ Volume • Power Button • MENU
	Functions	• Contrast • Brightness • Focus • Clock • H.Position • V.Position • Input signal Selection • Language • DDC/CI ON/OFF • (Warm) Color • (Cool)Color • RGB Color temperature • Reset • OSD position . timeout • Display information • Exit
Power Consumption (Maximum)		65 Watts
Audio Output		Rated Power 1.5W rms (Per channel)
Regulatory Compliance		CUL, FCC, VCCI, CCC, MPR II, CE, TÜV/GS, TCO'03, UL, ISO13406-2

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LCD Panel Specification

General Specifications

Items	Unit	Specifications
Active Area	[mm]	473.76 (H) x 296.1(V)
Pixels H x V		1680x3(RGB) x 1050
Pixel Pitch	[mm]	0.282x 0.282
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		TN Mode,Normally White
White Luminance	[cd/m^2]	300 cd/m2 @ 7.0mA (Typ)
Contrast Ratio		1000:1 (Typ)
Optical ResponseTime	[msec]	5 (Typ, on/off)
Nominal Input Voltage VDD	[Volt]	+5.0 V
Power Consumption (VDD line + CCFL line)	[Watt]	28.5W (Typ) (Without Invertor, All black pattern)
Weight	[Grams]	2385 **Note1**
Physical Size (H x V x D)	[mm]	493.7(W) x 320.1(H) x 16.7(D) (Typ)
Electrical Interface		Dual Channel LVDS
Support Colors		16.7M colors (6-bits + HiFRC)
Temperature Range Operating Storage (Shipping)	 [°C] [°C]	 0 to +50 -20 to +60
Surface Treatment		Hard-coating (2H), Glare treatment
RoHS Compliance		RoHS Compliance

Note1: 2500 gm (Max)

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Optical Specifications

Item	Unit	Conditions	Min.	Typ.	Max.
Viewing Angle	[degree]	Horizontal (Right)+ (Left) CR = 10	160	170	-
		Vertical (Up) + (Down) CR = 10	150	160	-
Luminance Uniformity	[%]	9 Points	75	80	-
Optical Response Time	[msec]	Rising	-	3.6	5.7
		Falling	-	1.4	2.3
		Rising + Falling	-	5	8
Color / Chromaticity Coordinates (CIE 1931)		Red x	0.616	0.646	0.676
		Red y	0.309	0.339	0.369
		Green x	0.260	0.290	0.320
		Green y	0.573	0.603	0.633
		Blue x	0.115	0.145	0.175
		Blue y	0.045	0.075	0.105
		White x	0.283	0.313	0.343
		White y	0.299	0.329	0.359
White Luminance (At CCFL= 7.0mA)	[cd/m^2]		250	300	-
Contrast Ratio		Normal Direction	800	1000	-
Cross Talk (At 75Hz)	[%]		-	-	1.5
Flicker	[dB]		-	-	-20

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Supported Timing

VESA MODES						
		Horizontal		Vertical		
Resolution	Total	Nominal Frequency +/- 0.5kHz	Sync Polarity	Nominal Freq. +/- 0.5kHz	Sync Polarity	Nominal Pixel Clock(MHz)
640 X 480@60Hz	800X525	31.469	N	59.940	N	25.175
640 X 480@72Hz	832X520	37.861	N	72.809	N	31.500
640 X 480@75Hz	840X500	37.500	N	75.00	N	31.500
800 X 600@56Hz	1024X625	35.156	N/P	56.250	N/P	36.000
800 X 600@60Hz	1056X628	37.879	P	60.317	P	40.000
800 X 600@72Hz	1040X666	48.077	P	72.188	P	50.000
800 X 600@75Hz	1056X625	46.875	P	75.000	P	49.500
1024X768@60Hz	1344X806	48.363	N	60.004	N	65.000
1024X768@70Hz	1328X806	56.476	N	70.069	N	75.000
1024X768@75Hz	1312X800	60.023	P	75.029	P	78.750
1280X960@60Hz	1800X1000	60.000	P	60.000	P	108.000
1280X1024@60Hz	1688X1066	63.981	P	60.020	P	108.000
1280×1024@75Hz	1688X1066	79.976	P	75.025	P	135.000
1440X900@60Hz	1904X934	55.93	P	60.000	P	106.500
1680X1050@60Hz	2240X1089	65.29	N	59.95	P	146.25
IBM MODES						
		Horizontal		Vertical		
720X400@70Hz	900X449	31.469	N	70.087	P	28.322
640X350@70Hz	800X449	31.469	P	70.087	N	25.175
1024X768@72Hz	1304X798	57.515	P	72.1	P	75.000
MAC MODES						
640X480@67Hz	864X525	35.000	N	66.667	N	30.240
832X624@75Hz	1152X667	49.725	N	74.551	N	57.2832
1024X768@60Hz	1312X813	48.780	N	60.001	N	64.000
1024X768@75Hz	1328X804	60.241	N	74.927	N	80.000

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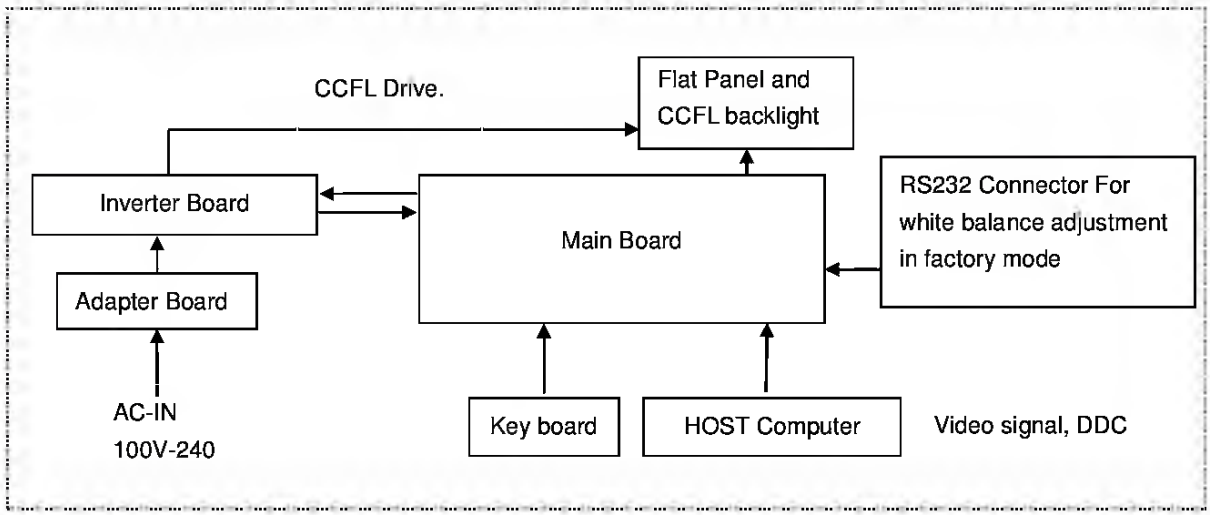
Monitor Block Diagram

The LCD MONITOR will contain a main board, a power board, and key board which house the flat panel control logic, brightness control logic and DDC.

The Inverter board will drive the backlight of panel and the DC-DC conversion,

The Adapter will provide the 12V DC-power to inverter/power board.



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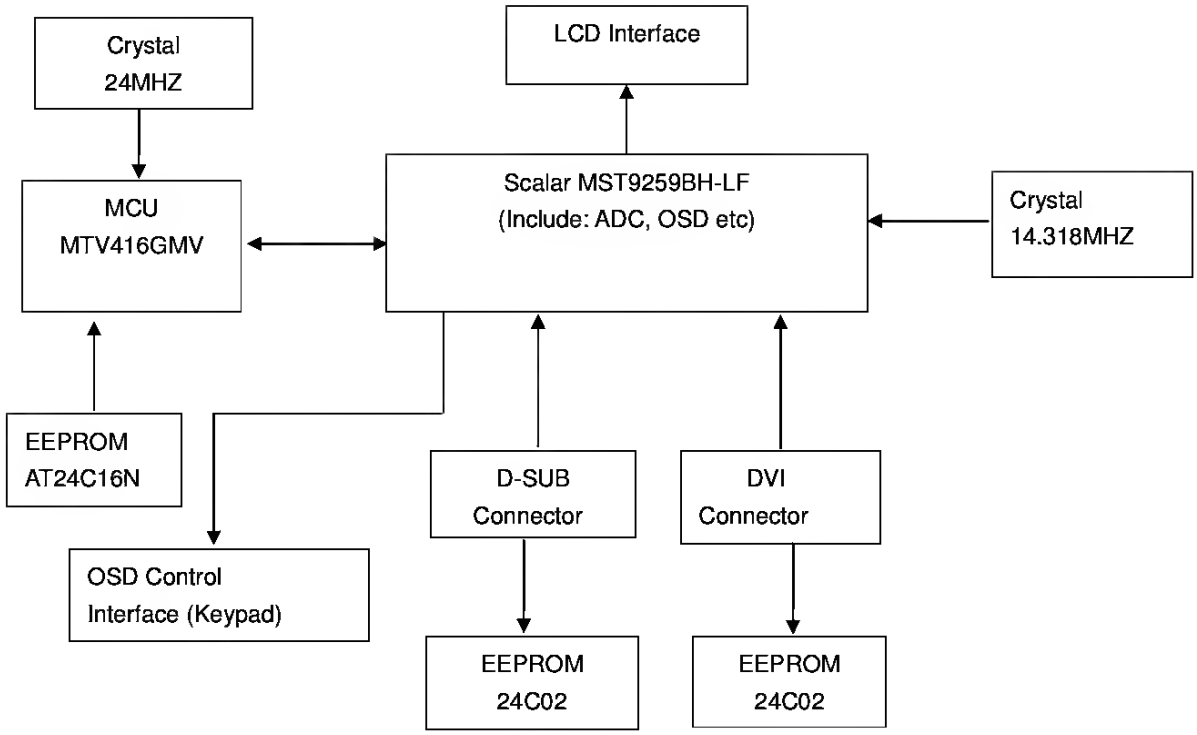
Main Board Diagram



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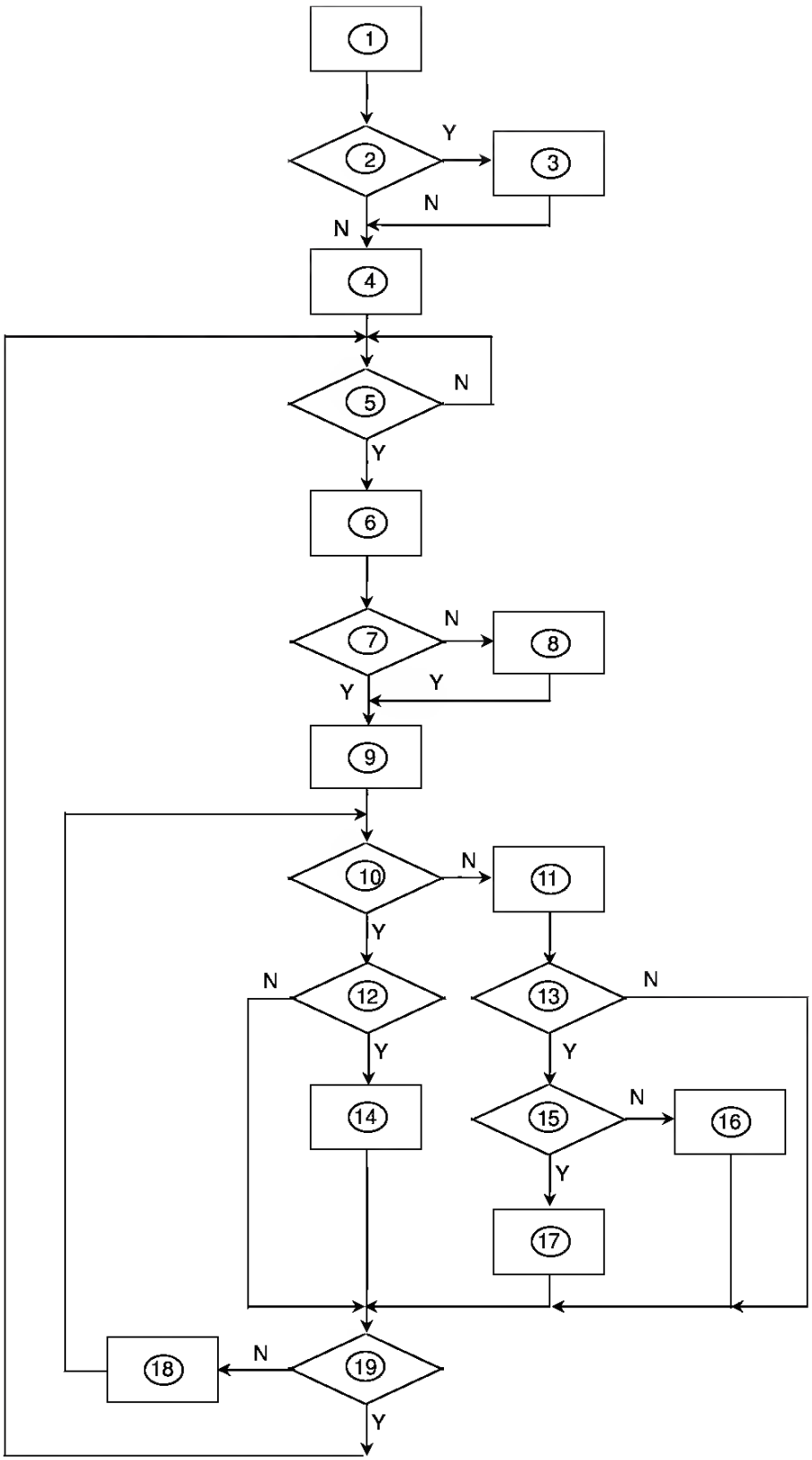
Software Flow Chart



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Remark:

1) MCU initializes.
2) Is the EEPROM blank?
3) Program the EEPROM by default values.
4) Get the PWM value of brightness from EEPROM.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EEPROM. Turn on the LED and set it to green color. Scalar initializes.
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog port, are there any signals coming?
13) Does the scalar send out an interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog port?
16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappears.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed?

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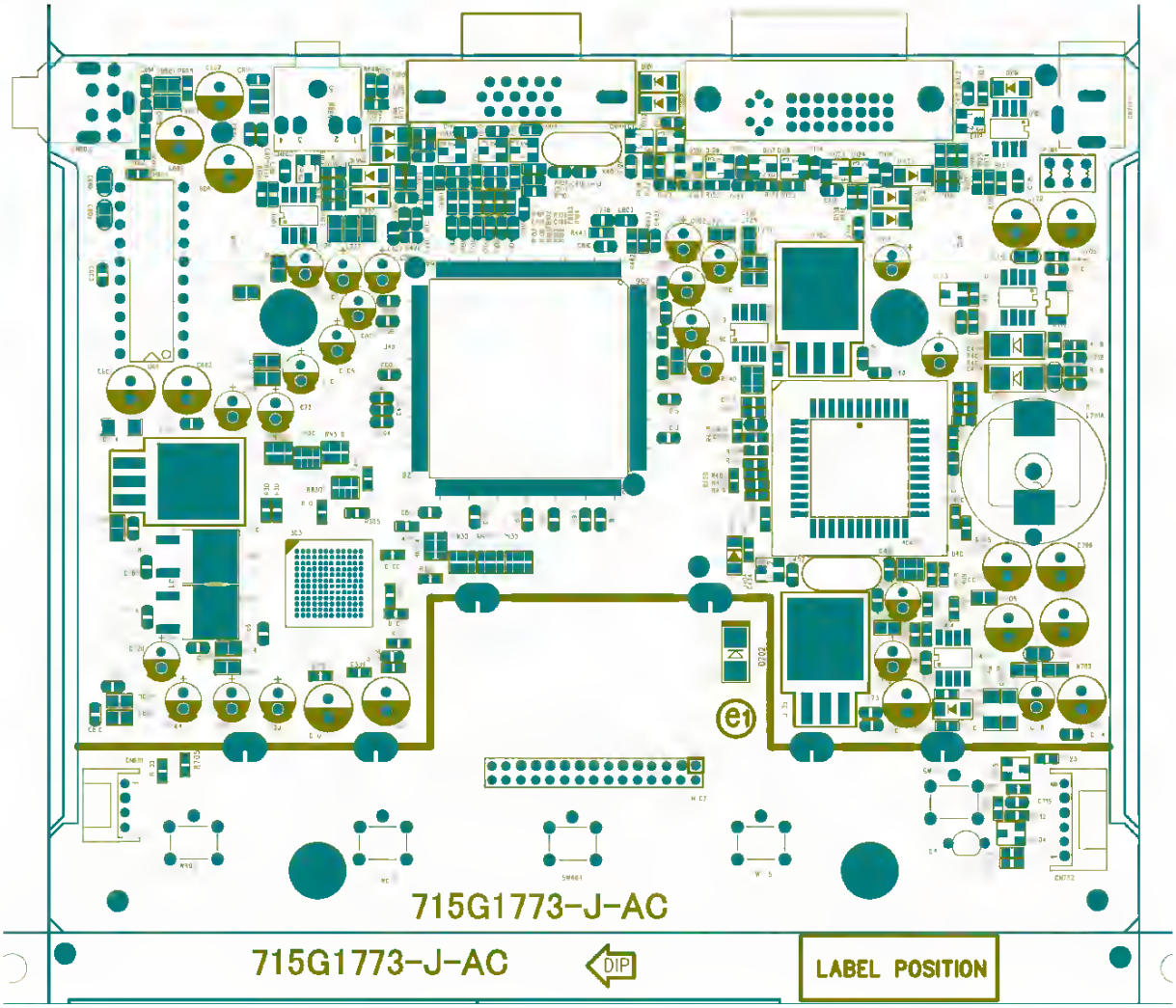
Main Board Layout



Symbol	Description	Symbol	Description
U303	EM6A9320BI-5MG FBGA-144	X401	CRYSTAL 14.318MHzHC-49US
U403	M24C16-WMN6TP	CN101	D-SUB 15PIN
U402	MTV416GMV	RN102	DVI CONNECTOR 24PIN
U705	IC AIC1084-33PMTR-R AIC	CN701	DC JACK 3PIN
U405	CAT24WC08W SOIC-8	CN702	WAFER 6P RIGHT ANGLE PITCH 2.0
U706	AZ1117D-2.5-E1	CN407	WAFER 30P 2.0MM RIGHT ANGLE
U704	AZ1117D-2.5-E1	CN601	WAFER 4P RIGHT ANGLE
U703	IC AIC1084-18PMTR-R AIC	CN602	PHONE JACK 5PIN
U702	IC AIC1117-33PYTR-R AIC	CN603	PHONE JACK 5PIN

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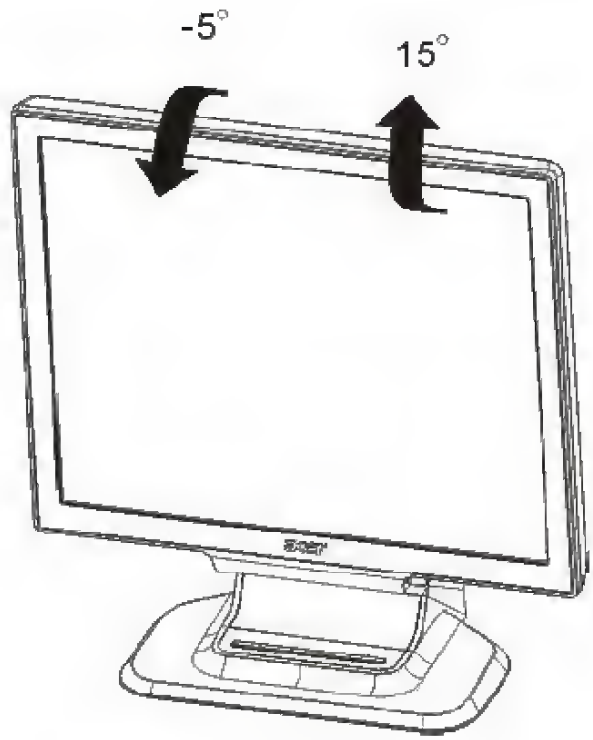
Adjusting the viewing angle

- For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.
- Hold the stand so you do not topple the monitor when you change the monitor's angle.
- You can adjust the angle of the monitor from -5° to 15°; but please notice that the rear obliquity of the monitor must not be over 15° when you adjust it, otherwise the machine may be inclined.



NOTES

- Do not touch the LCD screen when you change the angle. It may cause damage or break the LCD screen.
- Careful attention is required not to catch your fingers or hands when you change the angle.

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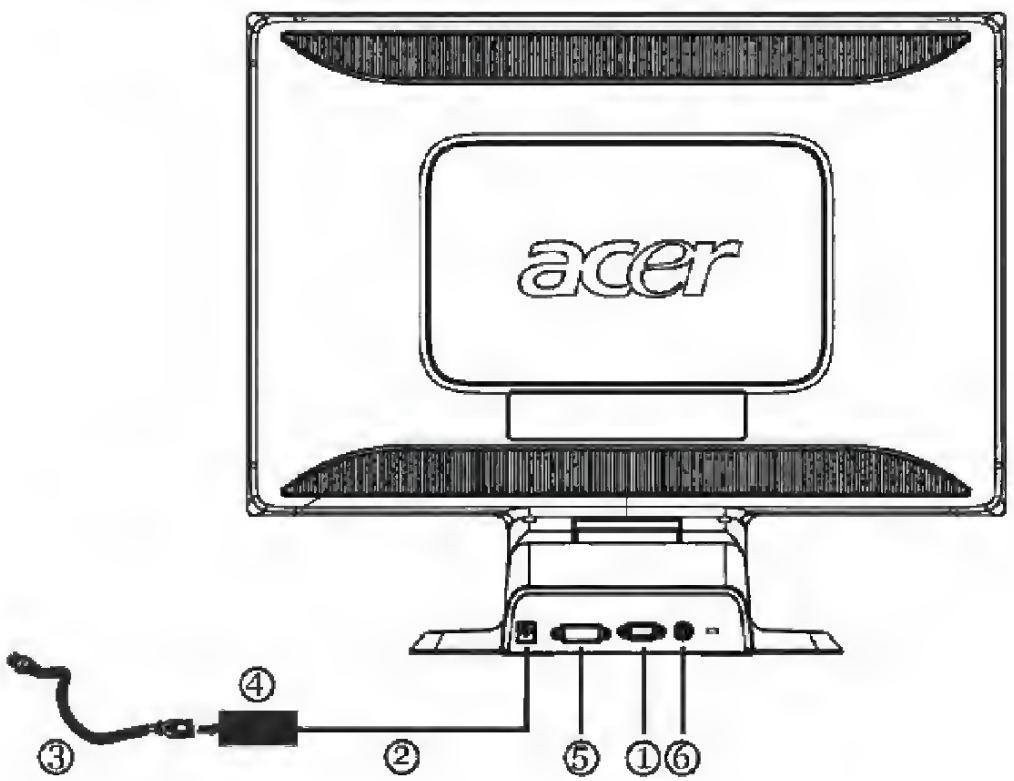
Rear Bezel



Item	Description	Item	Description
1.	D-SUB Cable	4.	External Adapter
2.	DC-Jack Power Cable	5.	DVI Cable
3.	AC Power Cord	6.	Audio cable

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Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor position. The power indicator will light up.

External Controls

Item	Description	Item	Description
1.	>/ Volume	4.	MENU/ENTER
2.	</ Volume	5.	Auto Adjust Key / Exit
3.	Power Key / Power Indicator		

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Front Panel Control

- **Power Button:**
  Press this button to turn the monitor ON or OFF. And display the monitor's state.

- **Power Indicator:**
  Blue – Power On mode
  Orange – Stand by mode.

- **Menu / Enter:**
  Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON or Exit OSD menu when in Volume Adjust OSD status .

- </Volume:
  Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- >/Volume:
  Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **Auto Adjust button / Exit:**
  1. When OSD menu is in active status, this button will act as EXIT-KEY (EXIT OSD menu).
  2. When OSD menu is in off status, press this button for 2 seconds to activate the Auto Adjustment function.
     The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus.

NOTES

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.
- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

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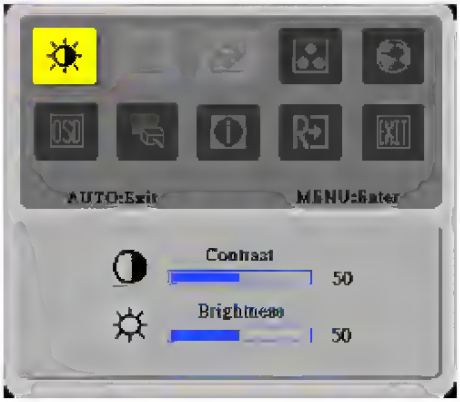
Adjusting the Picture

How to Adjust a Setting

1. Press the MENU-button to activate the OSD window.
2. Press <or >to select the desired function.
3. Press the MENU-button to select the function that you want to adjust.
4. Press < or >to change the settings of the current function.
5. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-4

Analog Signal Input



Digital Signal Input

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b. The Description For Function Control LEDS

Main Menu Icon	Sub Menu Icon	Sub Menu Item	Description
		Contrast	Adjusts the contrast between the foreground and background of the screen image.
		Brightness	Adjusts the background brightness of the screen image.
		Focus	Adjusts picture Focus (available in Analog mode only).
		Clock	Adjusts picture Clock (available in Analog mode only).
		H. Position	Adjust picture Focus (available in Analog mode only).
		V. Position	Adjust picture Clock (available in Analog mode only).
	N/A	Warm	Set the color temperature to warm white.
	N/A	Cool	Set the color temperature to cool white.
		User /Red	Adjusts Red/Green/Blue intensity.
		User/Green	
		User/Blue	

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	N/A	Language	Multi-language selection.
		H. Position	Adjust the horizontal position of the OSD.
		V. Position	Adjust the vertical position of the OSD.
		OSD Timeout	Adjust the OSD timeout.
	N/A	Analog	Select input signal from analog (D-Sub).
	N/A	Digital	Select input signal from digital (DVI).
	N/A	DDC/CI	Turn ON/OFF DDC/CI support.
	N/A	Information	Show the resolution, H/V frequency and input port of current iput timing.
	N/A	Reset	Clear each old status of Auto-configuration.
	N/A	Exit	Save user adjustment and OSD disappear.

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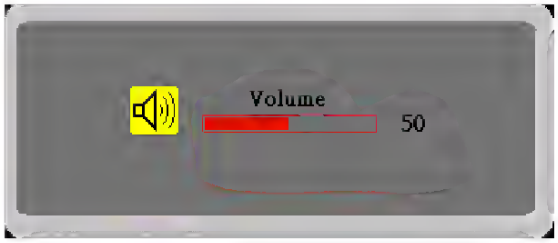
Hot-Key Menu

a. Outline



b. The Description For Hot-Key Function

Item	Operation	Icon	Description
Volume	When the OSD is closed, press Left or Right button will be Volume Hot-Key Function		Volume of Audio adjustment. The Audio will be Mute when volume=0

OSD Message

a. Outline

b. The Description For OSD Message

Item	Description
Auto Config Please Wait	When Analog signal input, if User Press Hot-Key “Auto”, will show this message, and the monitor do the auto config function.
Input Not Supported	When the Hsync Frequency, Vsync Frequency or Resolution is out of the monitor support range, will show this message. This message will be flying.
Cable Not Connected	Analog-Only Model: When the video cable is not connected, will show this message. This message will be flying.
No Signal	Analog-Only Model: When the video cable is connected, but there is no active signal input, will show this message, then enter power saving.

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Logo

When the monitor is power on, the LOGO will be showed in the center, and disappear slowly.

How To Optimize The DOS-Mode

Plug And Play

Plug & Play DDC2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bi-directional data channel based on the I²C protocol. The host can request EDID information over the DDC2B channel.

This monitor will appear to be non-functional if there is no video input signal. In order for this monitor to operate properly, there must be a video input signal.

This monitor meets the Green monitor standards as set by the Video Electronics Standards Association (VESA) and/or the United States Environmental Protection Agency (EPA) and The Swedish Confederation Employees (NUTEK). This feature is designed to conserve electrical energy by reducing power consumption when there is no video-input signal present. When there is no video input signals this monitor, following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. Pressing a key on the keyboard, or clicking the mouse restores the display.

Using The Right Power Cord

The accessory power cord for the Northern American region is the wallet plug with NEMA 5-15 style and is UL listed and CSA labeled. The voltage rating for the power cord shall be 125 volts AC.

Supplied with units intended for connection to power outlet of personal computer: Please use a cord set consisting of a minimum No. 18 AWG, type SJT or SVT three conductors flexible cord. One end terminates with a grounding type attachment plug, rated 10A, 250V, and CEE-22 male configuration. The other end terminates with a molded-on type connector body, rated 10A, 250V, having standard CEE-22 female configuration.

Please note that power supply cord needs to use VDE 0602, 0625, 0821 approval power cord in European counties.

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This chapter contains step-by-step procedures on how to disassemble the monitor for maintenance.

Disassembly Procedure

1. Remove the hinge cover of base stand and remove the screws. Then remove the back cover (Fig1-2)

Fig 1

Fig 2

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2. Remove the screws to release base stand. (Fig 3)

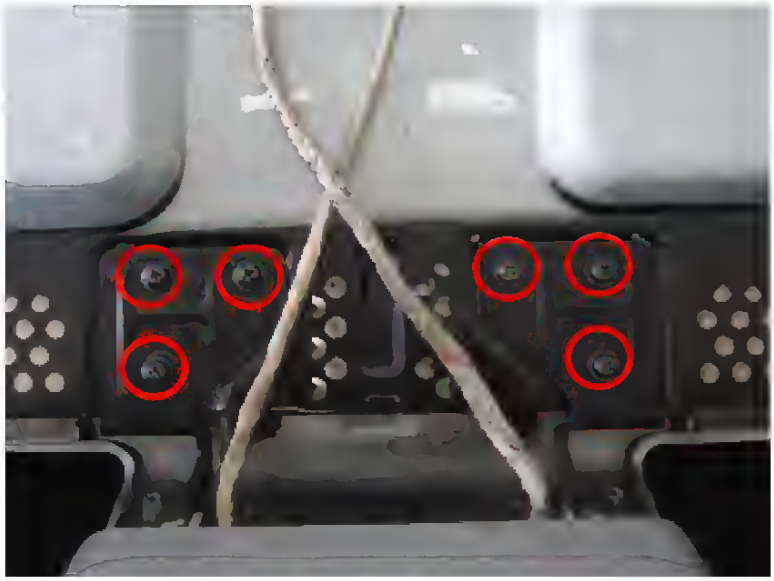

Fig 3

3. Remove the screws to remove the front bezel. (Fig 4)

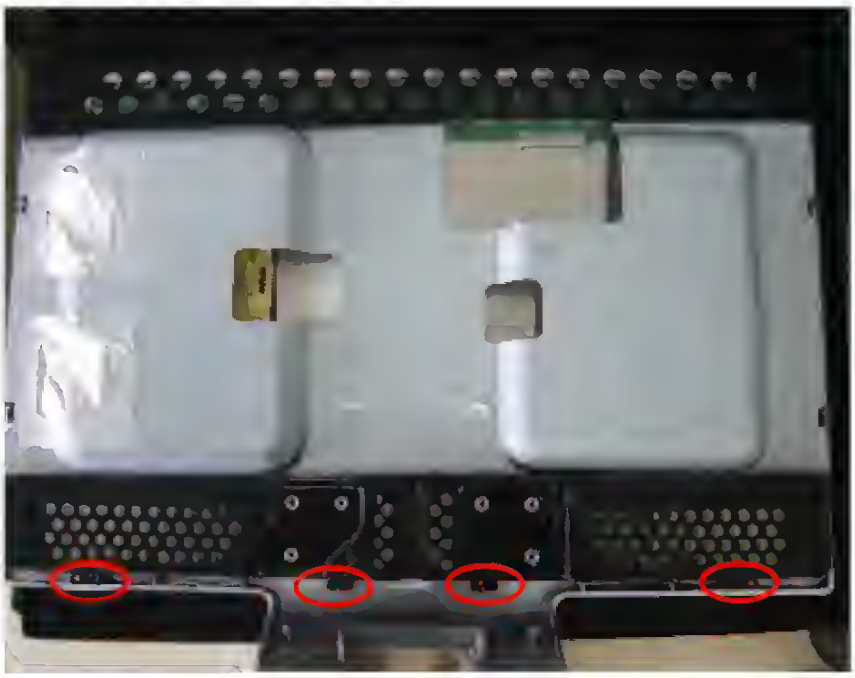

Fig 4

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4. Remove the shield. (Fig5)

Fig 5

5. Remove the screws to remove the inverter board. (Fig 6 - 7)

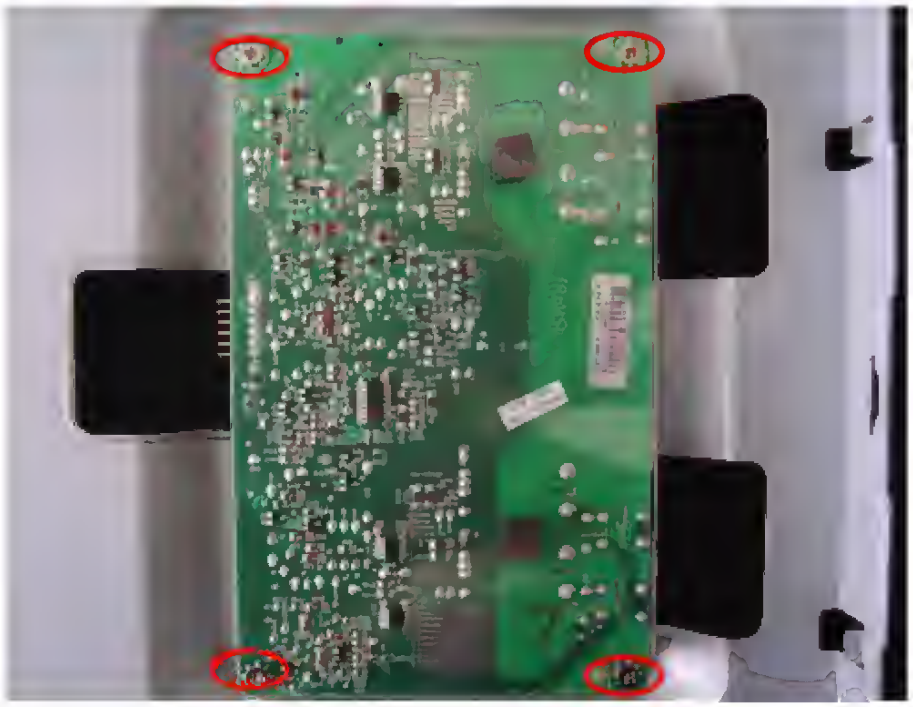

Fig 6

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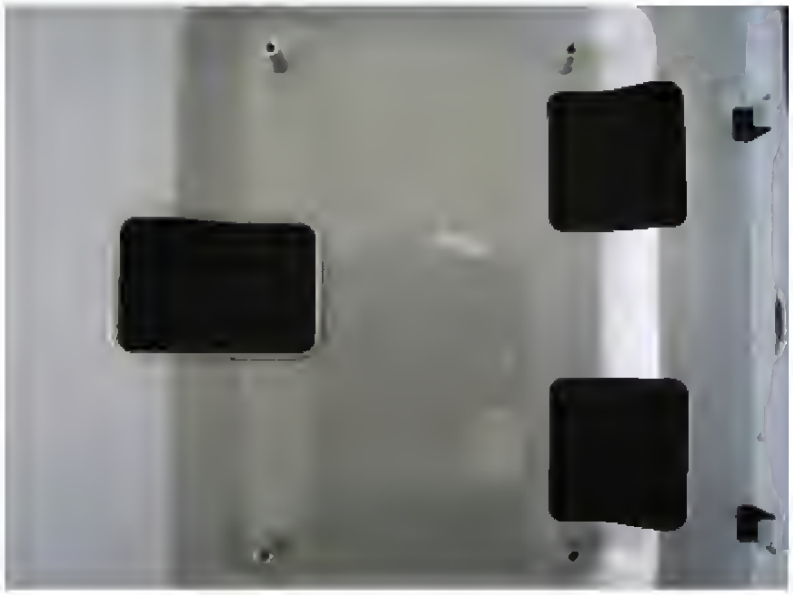

Fig 7

6. Remove the screws to remove the frame of the panel. (Fig 8-9)

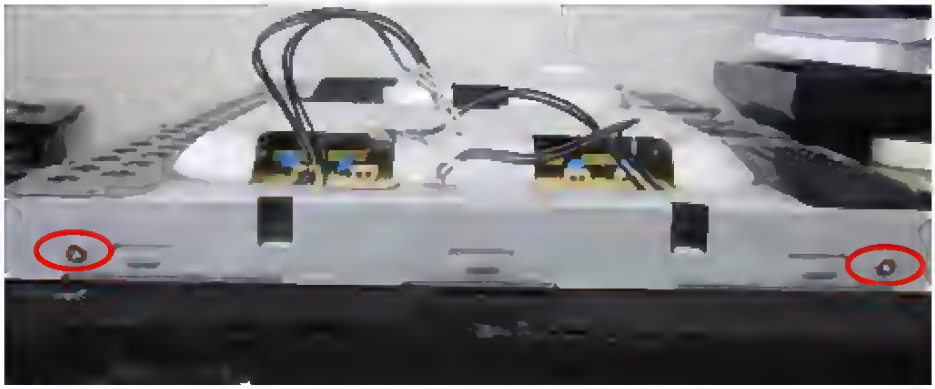

Fig 8

Fig 9

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Fig 10

7. Remove the screws to remove the base back cover. (Fig 11-12)

Fig 11

Fig 12

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8. Remove the screws to remove the base farther. (Fig 13)

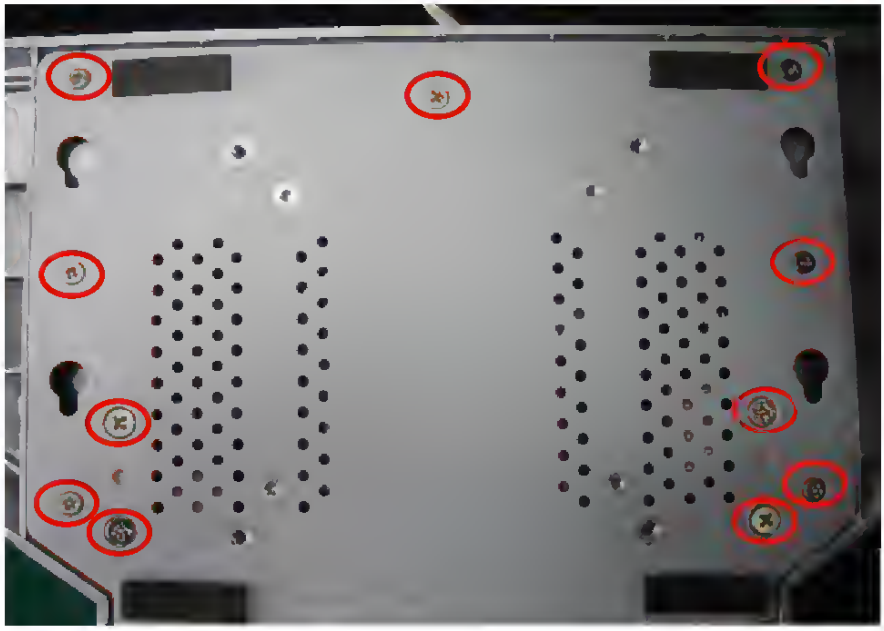

Fig 13

9. Remove the screws to remove the INPC wire, LVD wire, speaker wire. (Fig 14)

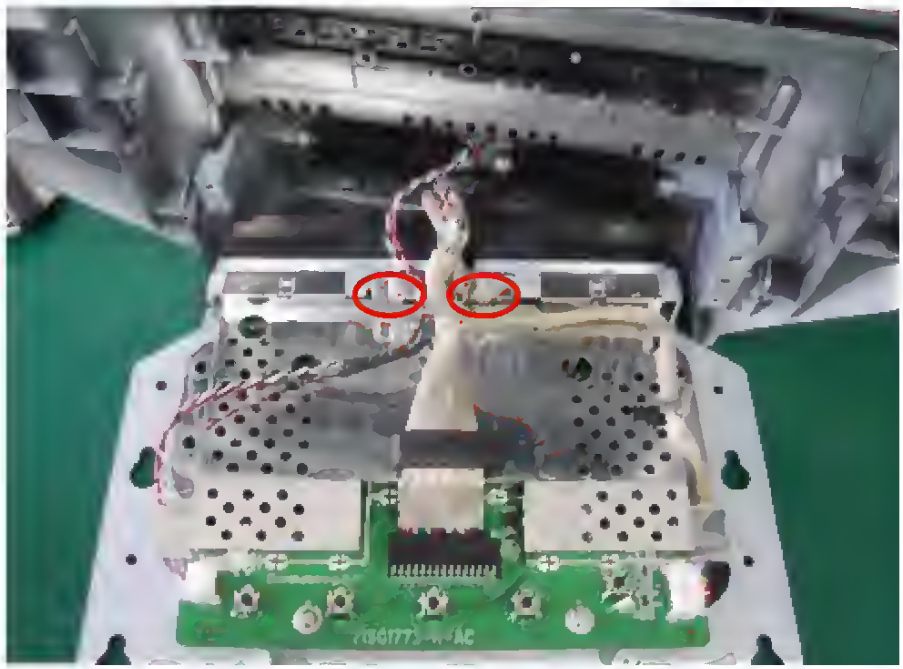

Fig 14

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10. Remove the screws to remove the main board. (Fig 15-16)

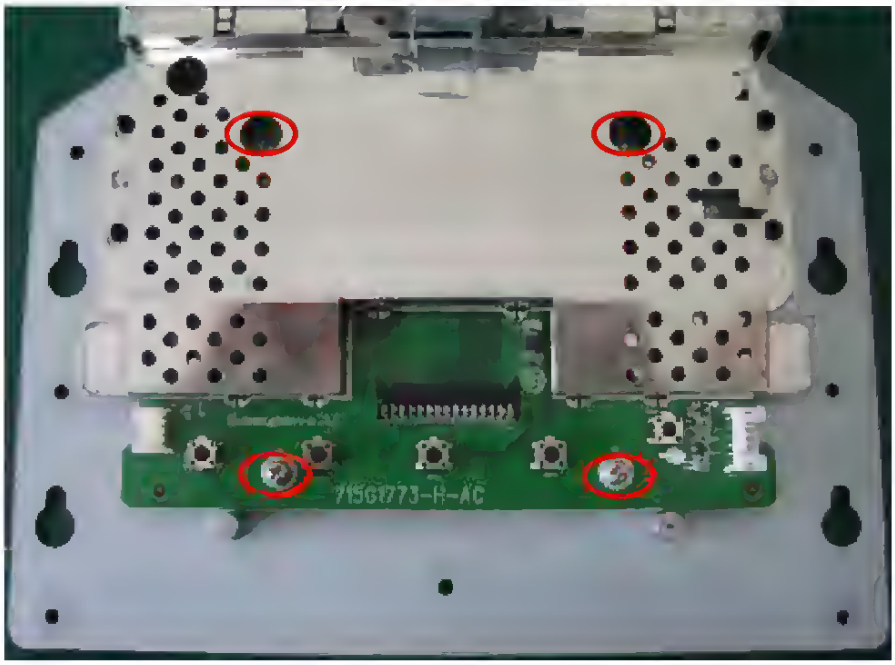

Fig 15

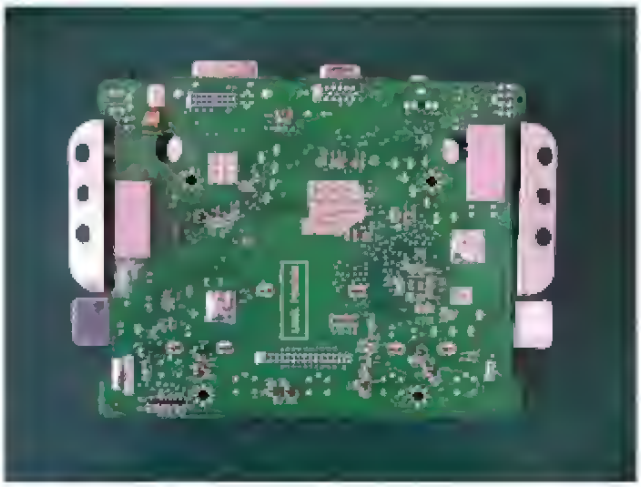

Fig 16

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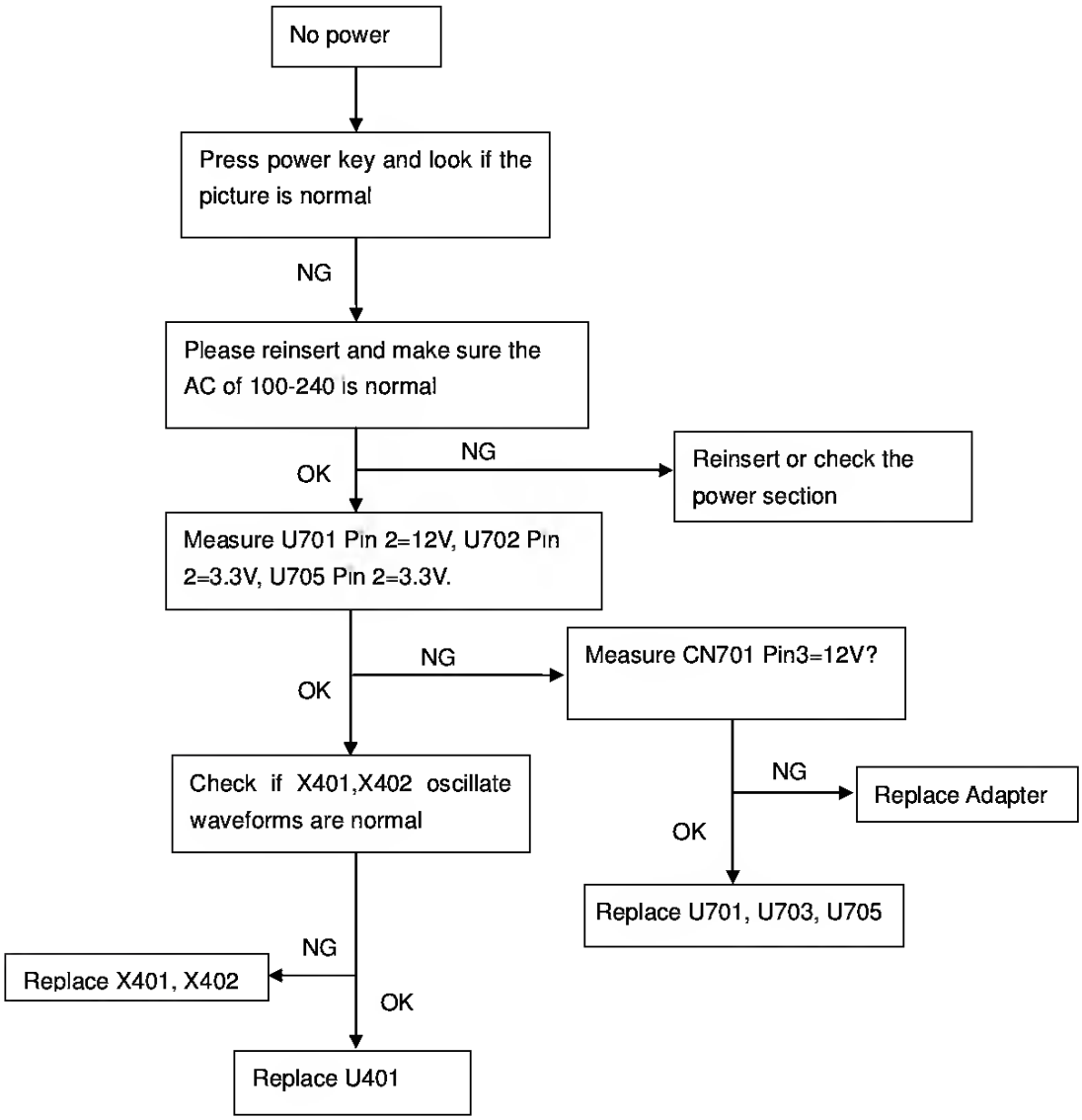
This chapter provides troubleshooting information for the AL2251W:

1. No Power



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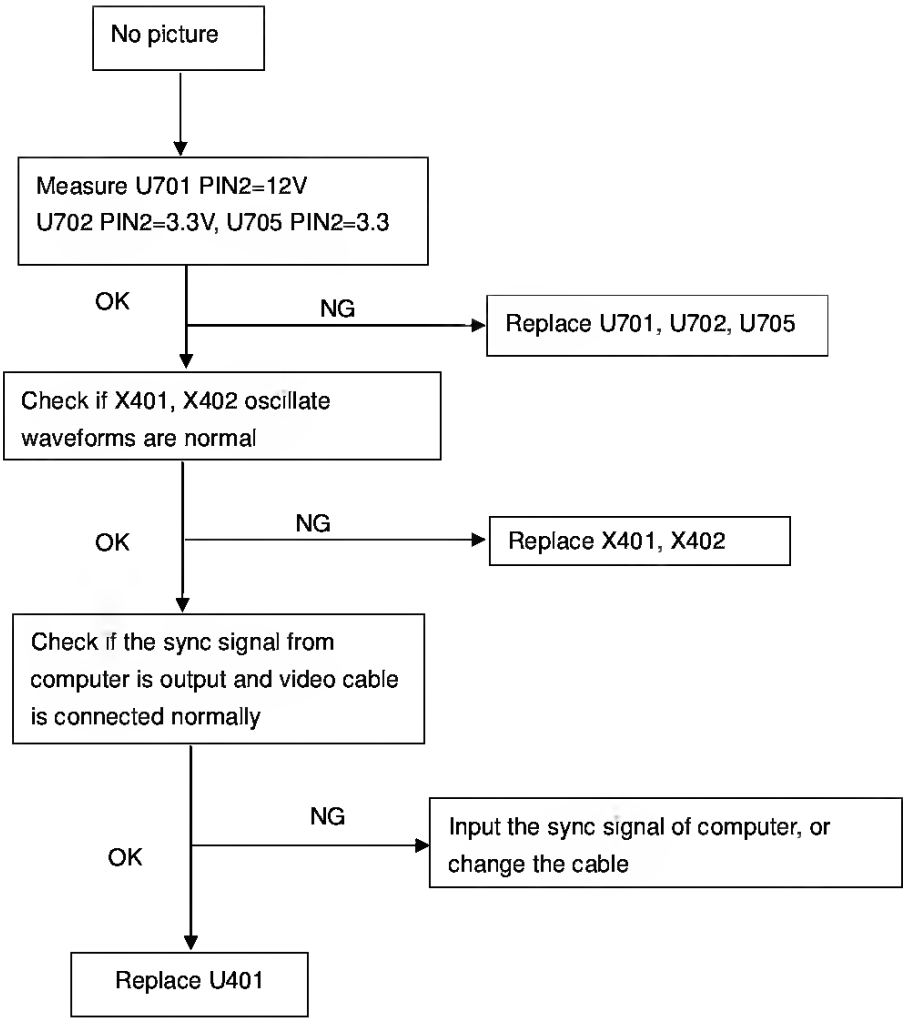
2. No Picture



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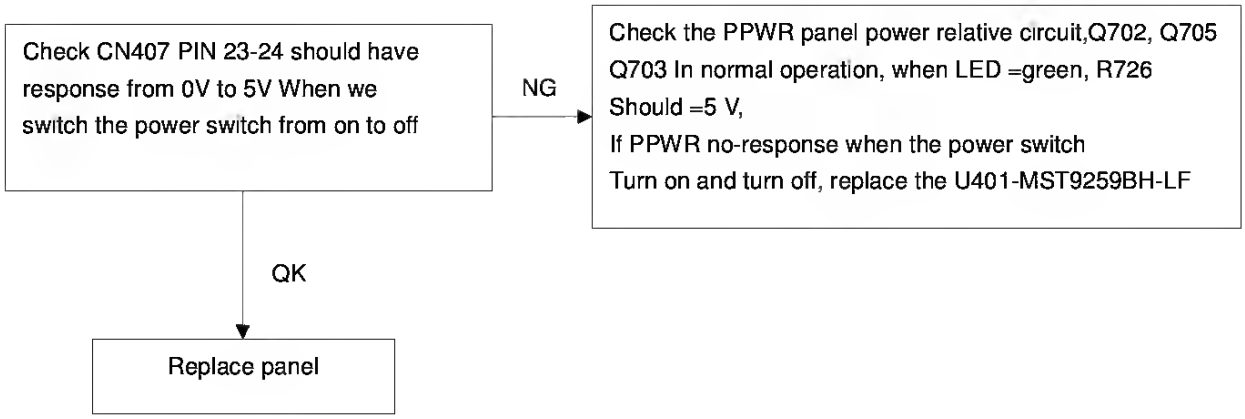
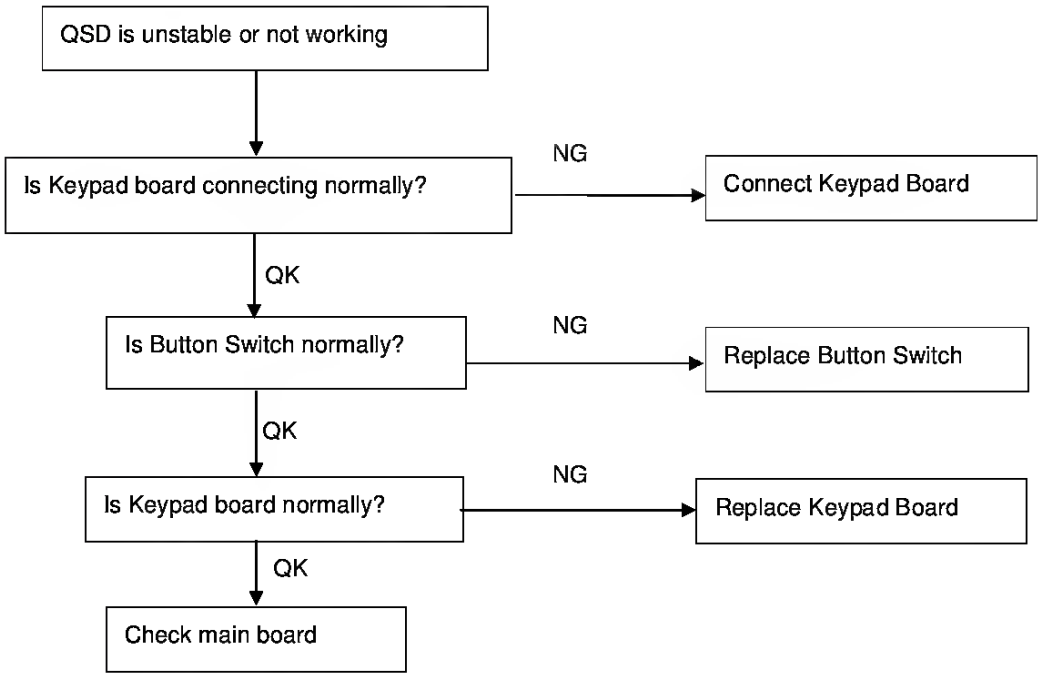
3. Panel Power Circuit


Check CN407 PIN 23-24 should have response from 0V to 5V When we switch the power switch from on to off
NG
Check the PPWR panel power relative circuit,Q702, Q705 Q703 In normal operation, when LED =green, R726 Should =5 V,
If PPWR no-response when the power switch Turn on and turn off, replace the U401-MST9259BH-LF
QK
Replace panel

4. Keypad Board



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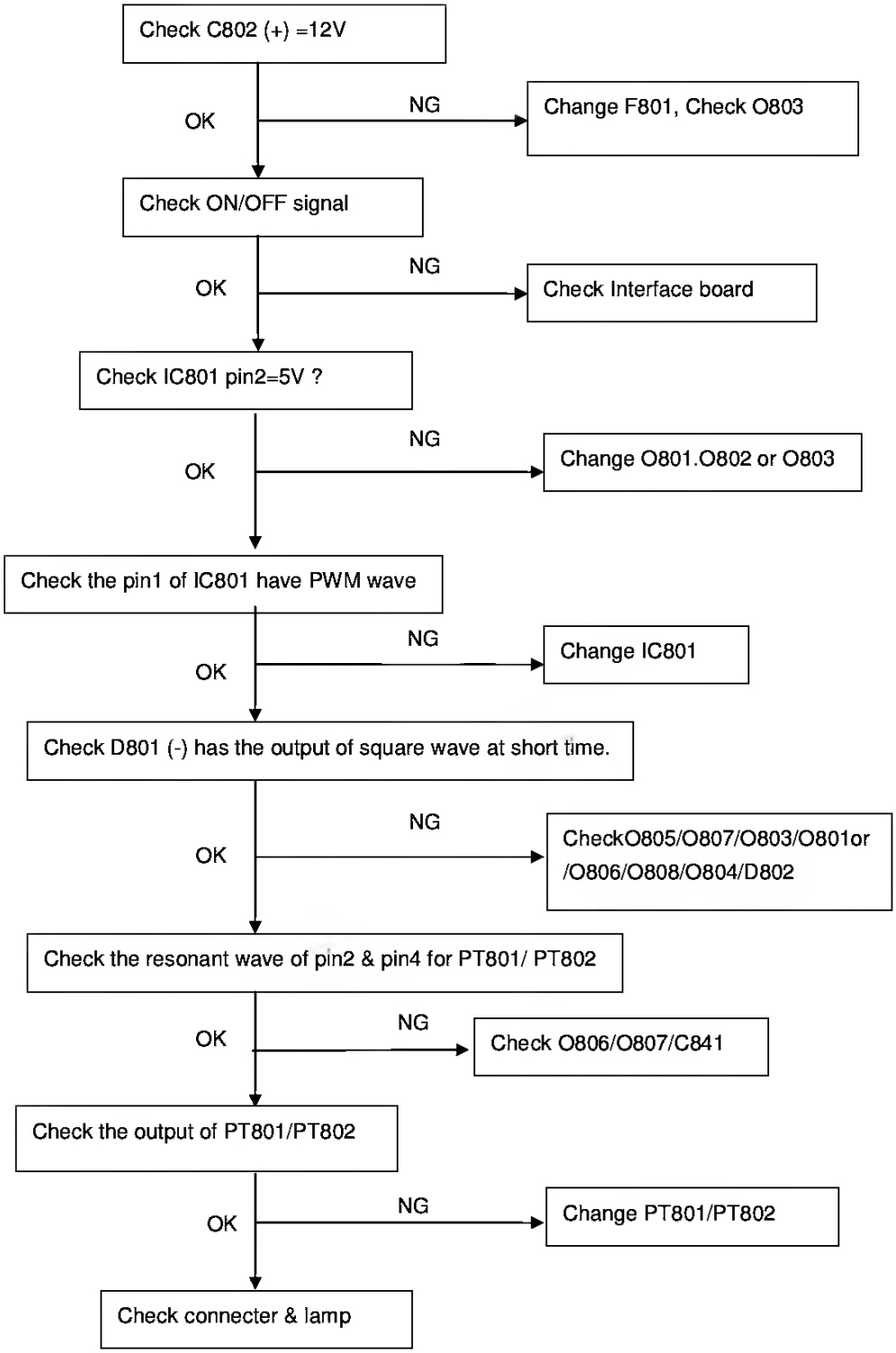
5. No Backlight



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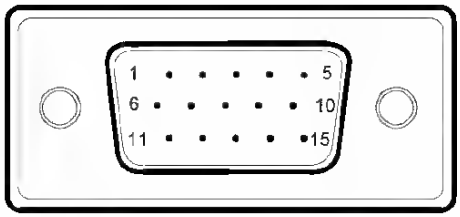
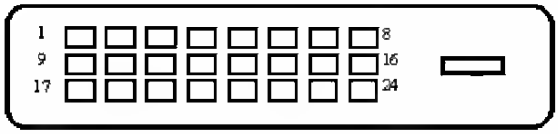
The following figure shows the connector locations on the monitor:



15 - Pin Color Display Signal Cable

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Logic Ground
3.	Blue	11.	Monitor Ground
4.	Monitor Ground	12.	DDC-Serial Data
5.	DDC-return	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		



24 - Pin Color Display Signal Cable

Pin	Meaning	Pin	Meaning
1.	TMDS Data2-	13.	TMDS Data3+
2.	TMDS Data2+	14.	+5V Power
3.	TMDS Data 2/4 Shield	15.	GND(return for +5V hsync.vsync)
4.	TMDS Data4-	16.	Hot Plug Detect
5.	TMDS Data4+	17.	TMDS Data0-
6.	DDC Clock	18.	TMDS Data0+
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	Analogue Vertical Sync	20.	TMDS Data5-
9.	TMDS Data1-	21.	TMDS Data5+
10.	TMDS Data1+	22.	TMDS Clock Shield
11.	TMDS Data 1/3 Shield	23.	TMDS Clock+
12.	TMDS Data3-	24.	DDC TMDS Clock-

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FRU (Field Replaceable Unit) List

Chapter 6

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AL2251W. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

NOTE: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel (http://aicsl.acer.com.tw/spl/). For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

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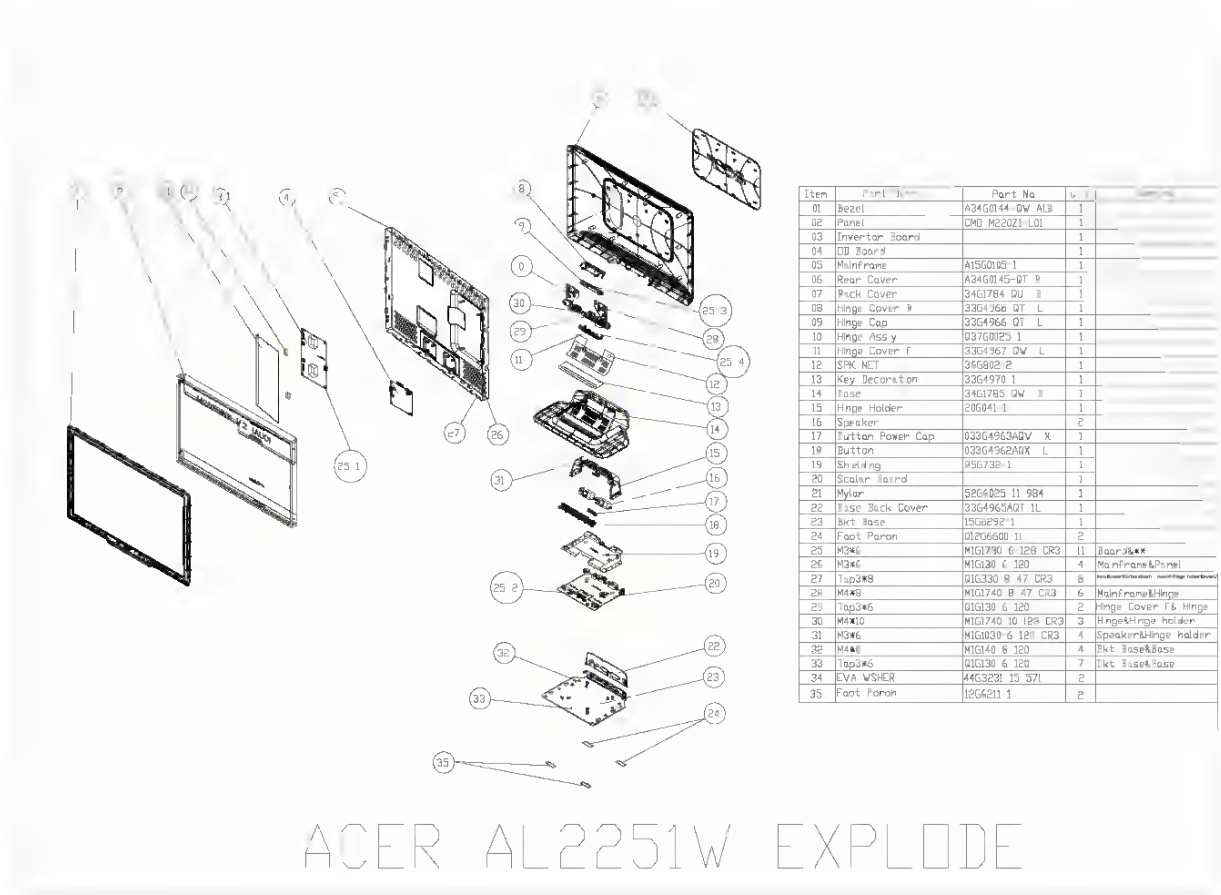
Exploded Diagram (Model: AL2251W)



Item	Part Name	Part No	Q'ty	
01	Bezel	A34G0144-QW A1B	1	
02	Panel	CMO M220Z1-L01	1	
03	Invertar Board		1	
04	OD Board		1	
05	Mainframe	A1SG0105-1	1	
06	Rear Cover	A34G0145-QT B	1	
07	Back Cover	34G1784 QU B	1	
08	Hinge Cover R	33G4966 QT L	1	
09	Hinge Cap	33G4966 QT L	1	
10	Hinge Ass y	037G0025 1	1	
11	Hinge Cover F	33G4967 QW L	1	
12	SPK NET	36G802-2	1	
13	Key Decoration	33G4970 1	1	
14	Base	34G1785 QW B	1	
15	Hinge Holder	20G041-1	1	
16	Speaker		2	
17	Button Power Cap	03364963A0V X	1	
18	Button	03364962A0X L	1	
19	Shelding	95G732-1	1	
20	Scaler Board		1	
21	Mylar	52G4025 11 9B4	1	
22	Base Back Cover	33G4965A0T 1L	1	
23	Bkt Base	15G0292-1	1	
24	Foot Poron	012G6600 11	2	
25	M3*6	M1G1790 6 128 CR3	11	Board&**
26	M3*6	M1G130 6 120	4	Mainframe&Panel
27	Tap3*8	Q1G330 8 47 CR3	8	
28	M4*8	M1G1740 8 47 CR3	6	Mainframe&Hinge
29	Tap3*6	Q1G130 6 120	2	Hinge Cover F& Hinge
30	M4*10	M1G1740 10 128 CR3	3	Hinge&Hinge holder
31	M3*6	M1G1030-6 128 CR3	4	Speaker&Hinge holder
32	M4*8	M1G140 8 120	4	Bkt Base&Base
33	Tap3*6	Q1G130 6 120	7	Bkt Base&Base
34	EVA WSHER	44G3231 15 571	2	
35	Foot Poron	12G6211 1	2	

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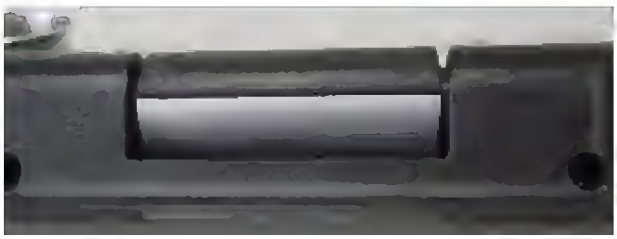
Part List

Above picture show the description of the following component.

Item	Picture	Description
1		Back Cover
2		Base back cover
3		Hinge cover
4		Panel

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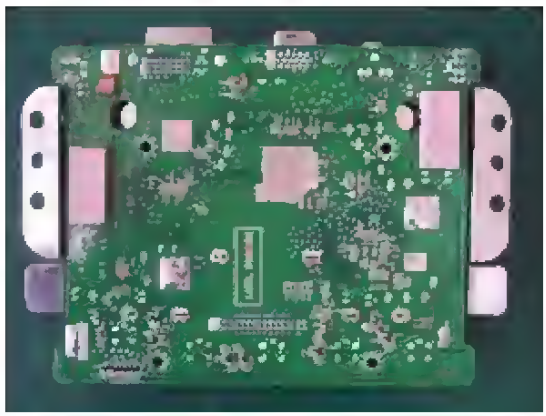
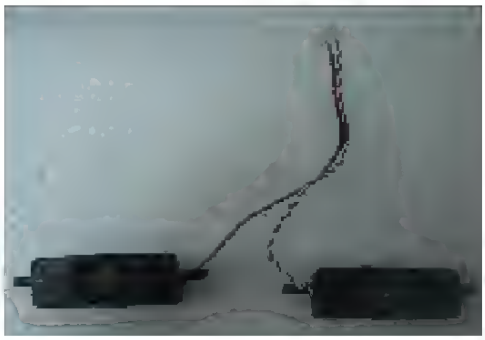
5		Inverter Board
6		Main Board
7		Speaker

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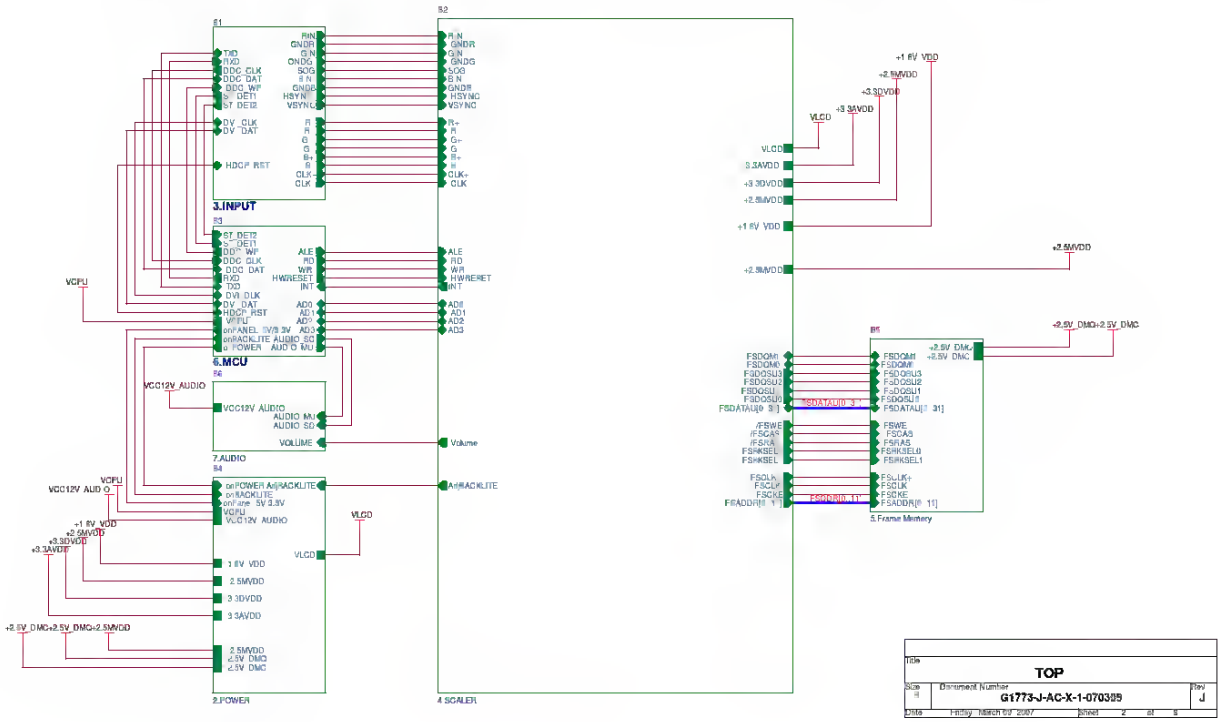
Main Board

MST9259V SCHEMATIC



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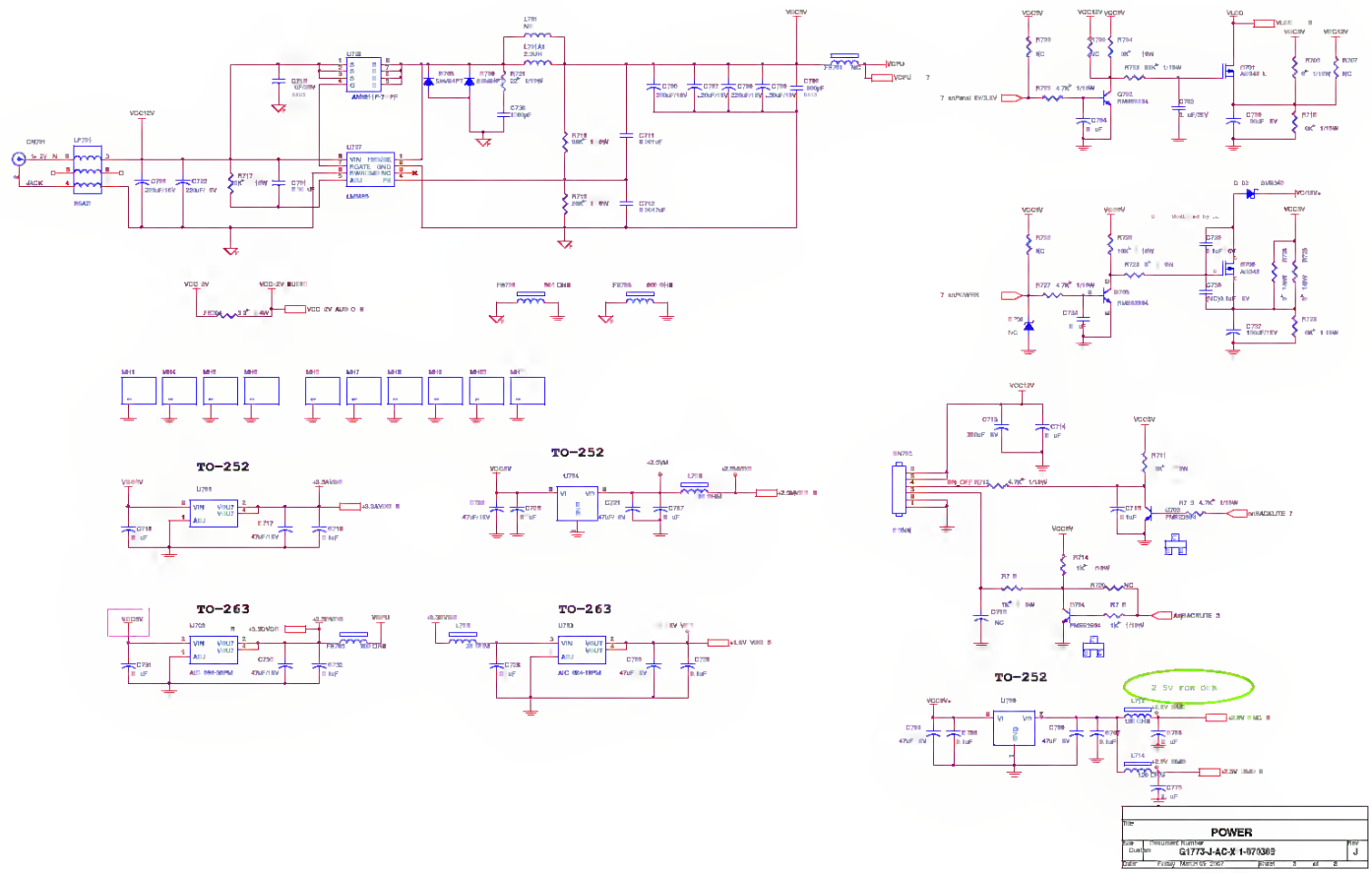

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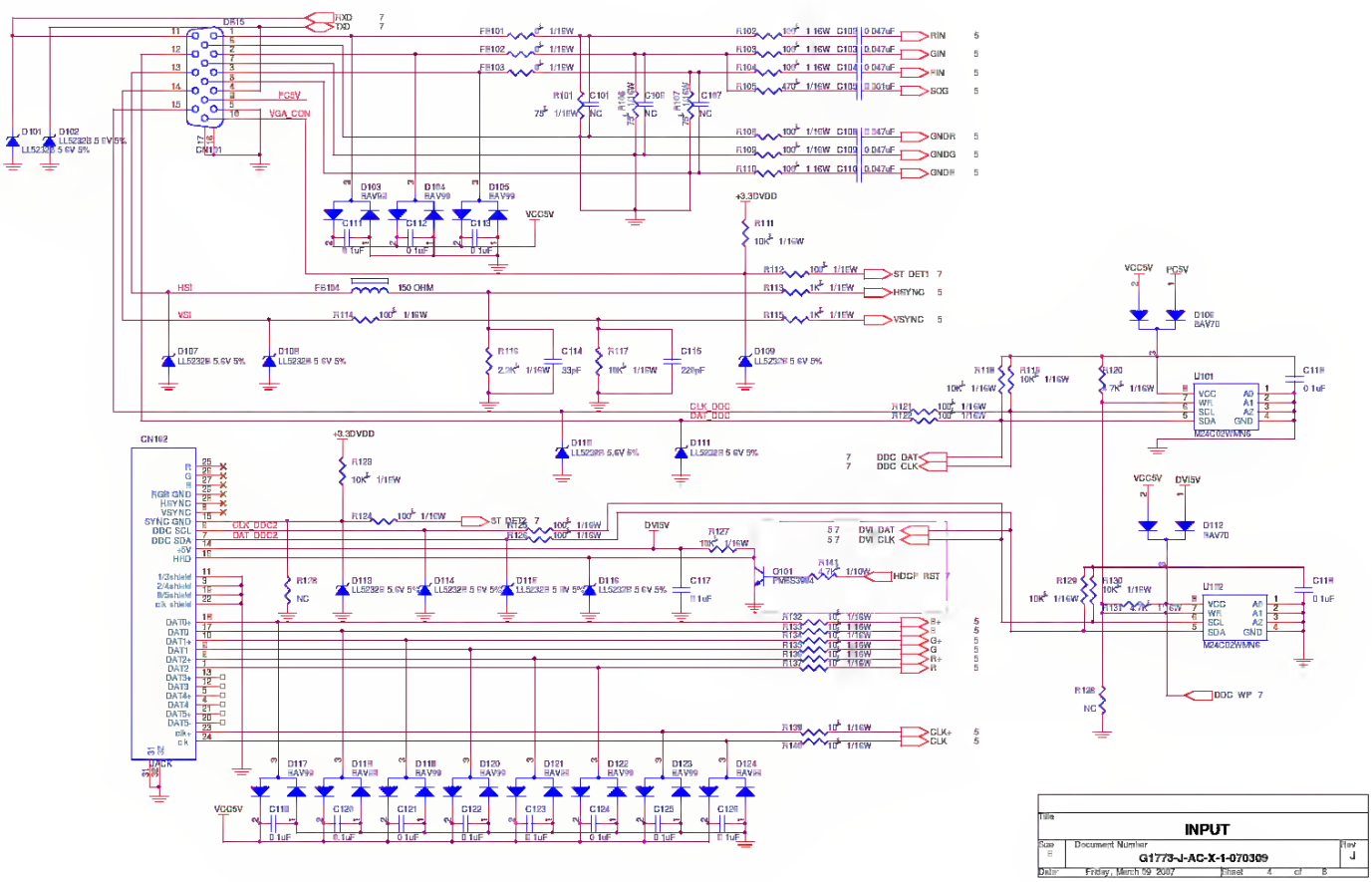

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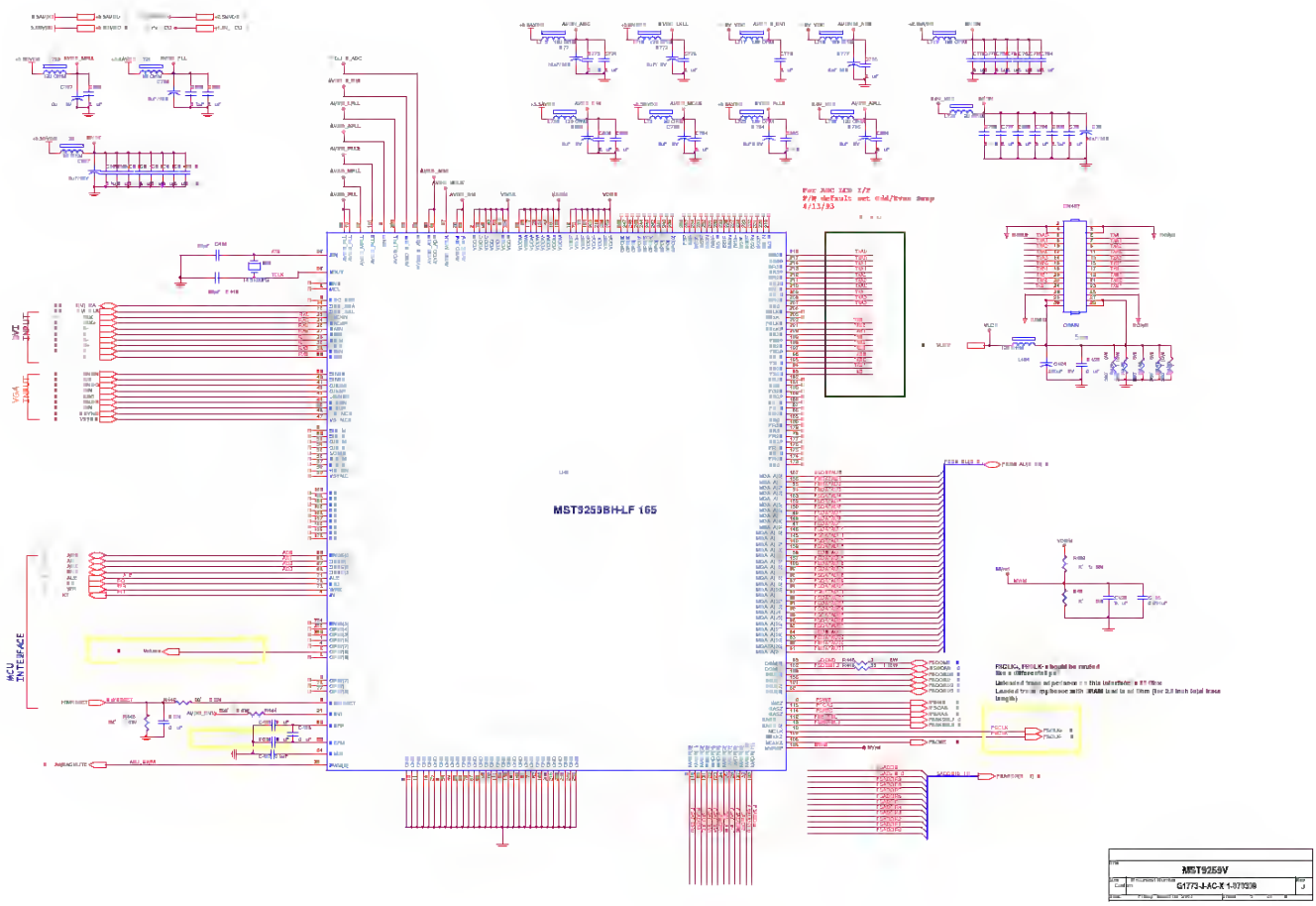

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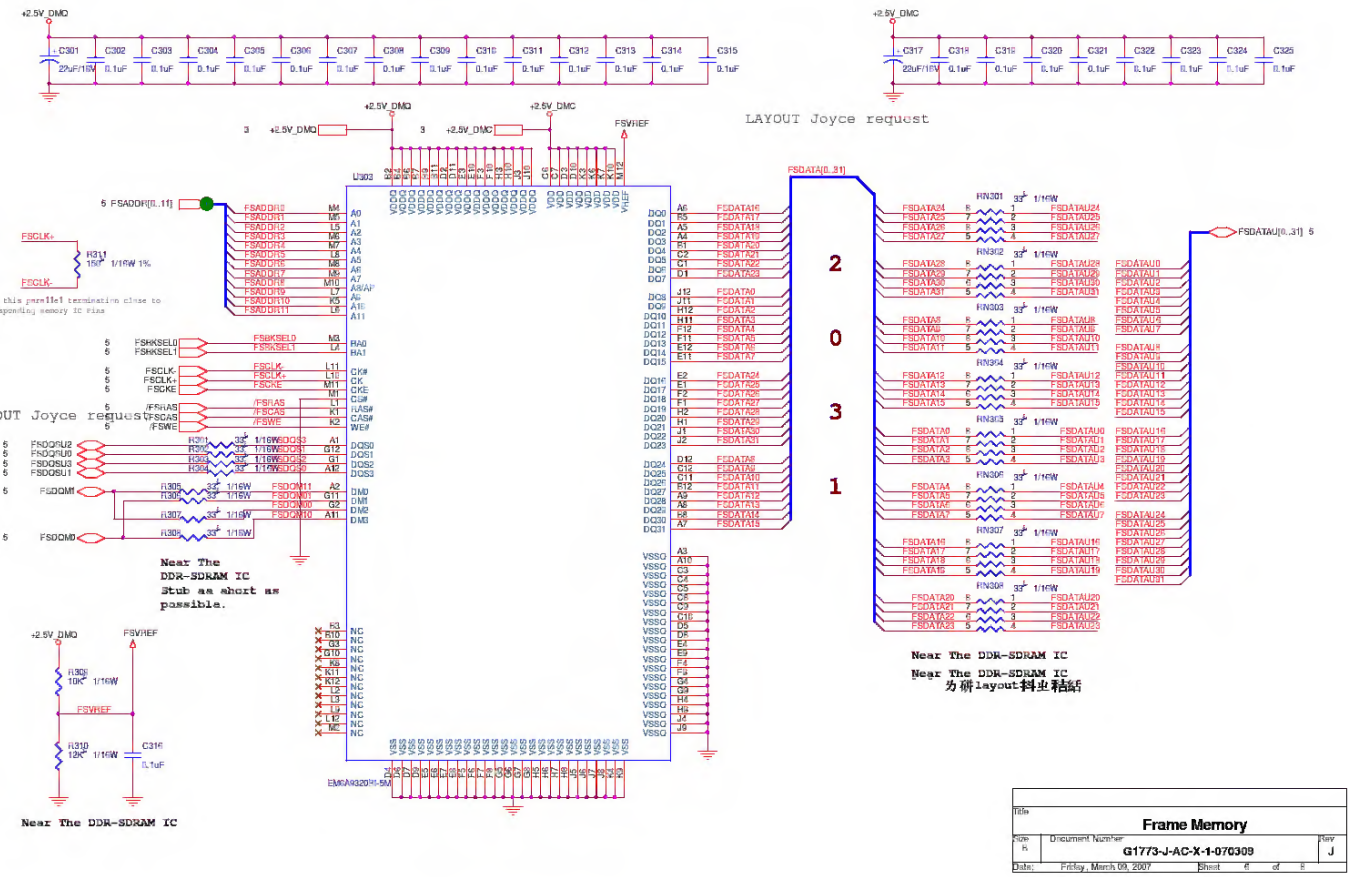

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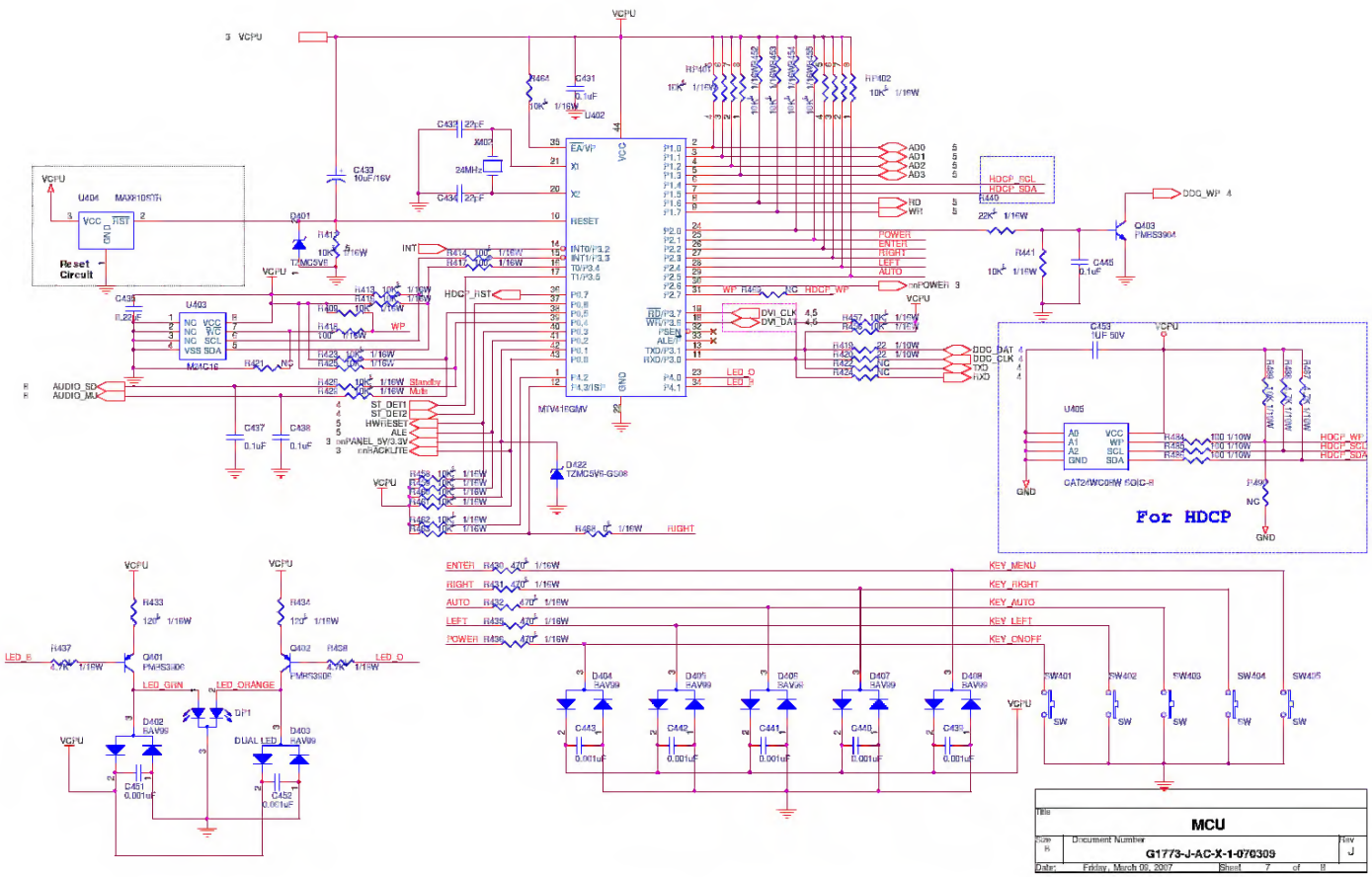

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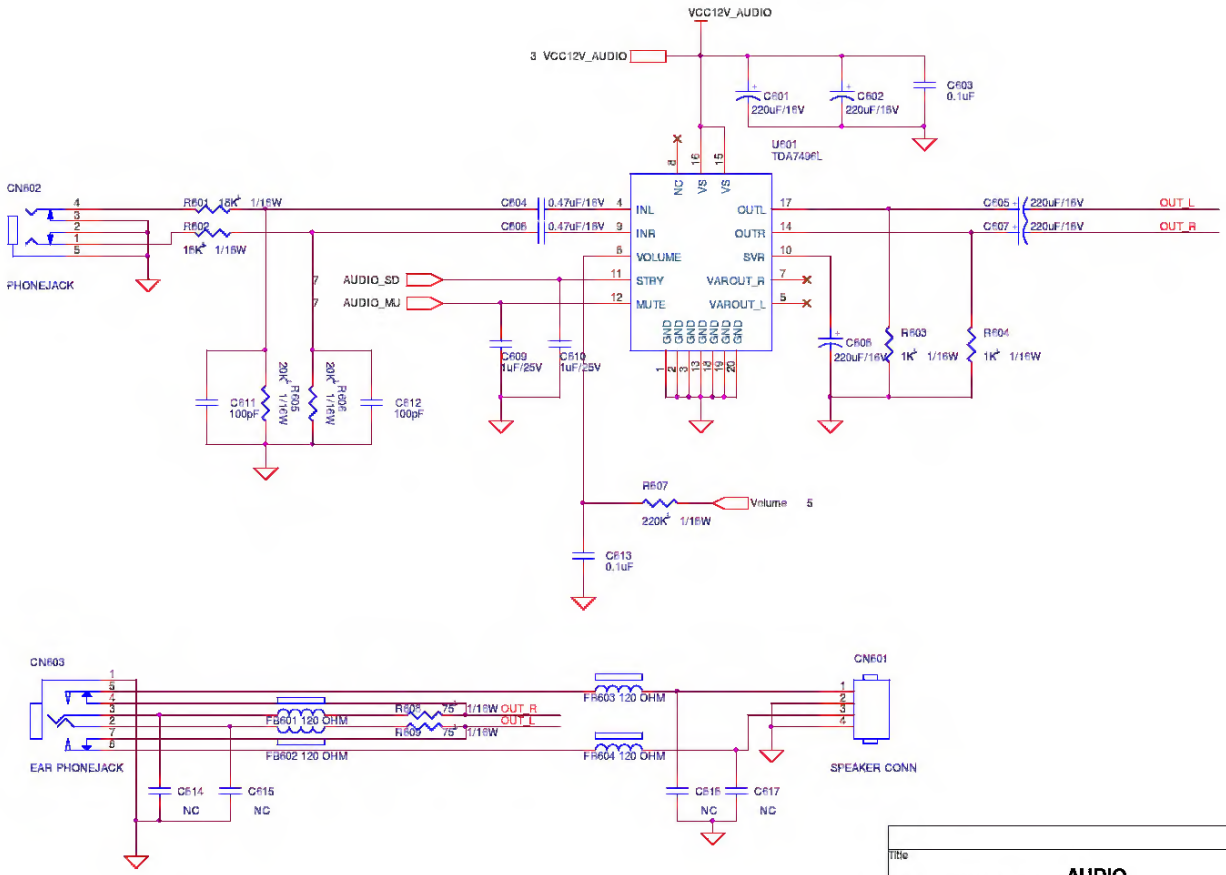

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Size A4	Document Number G1773-J-AC-X-1-070309	Rev J
Date: Friday, March 09, 2007	Sheet 5 of 6	

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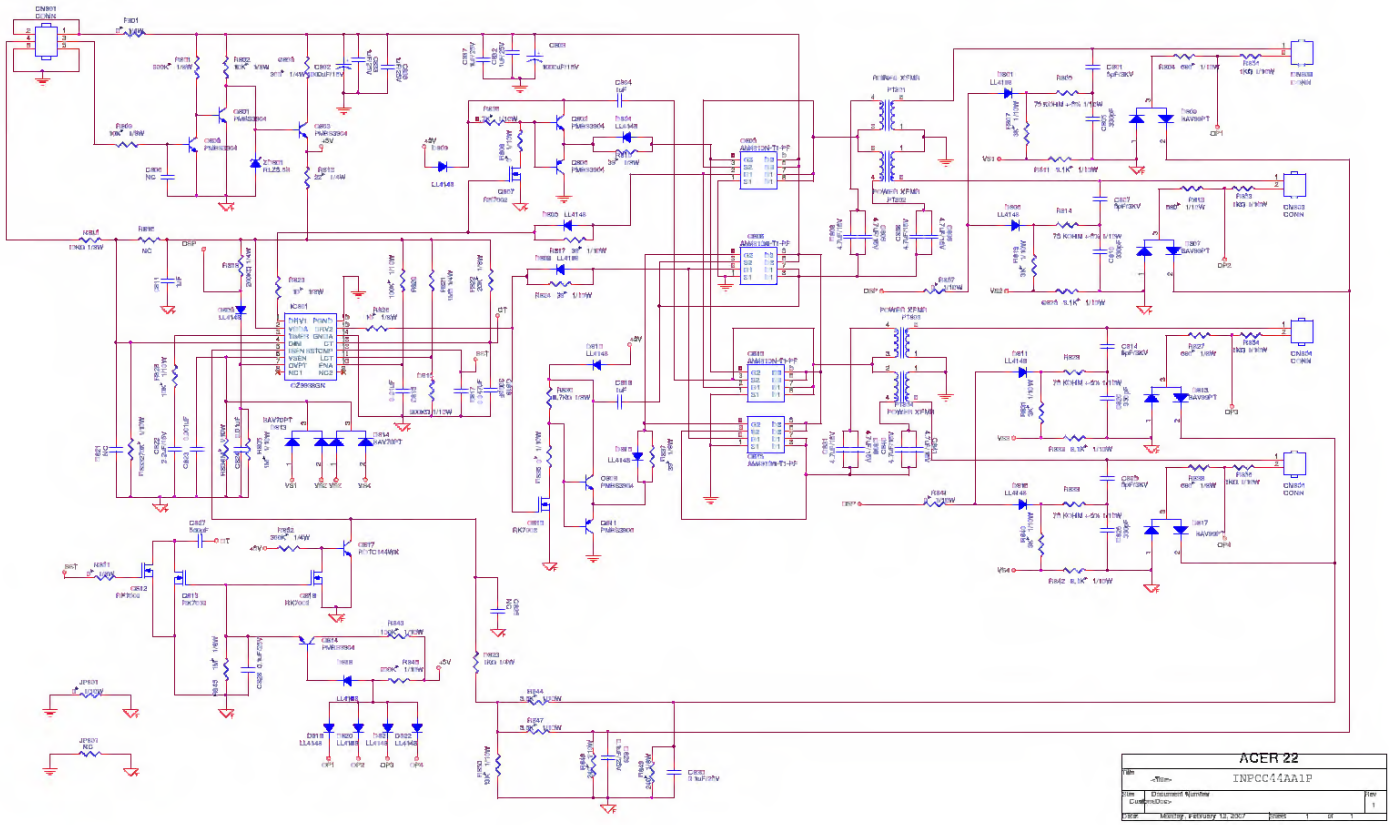
Inverter board



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